REMARKS/ARGUMENTS

This is a Response to the Office Action mailed July 13, 2007, in which a three (3) month Shortened Statutory Period for Response has been set, due to expire October 13, 2007. Claims 1 and 17 are currently amended. Claims 6, 7, 10, and 13 are canceled. No new matter has been added to the application. No fee for additional claims is due by way of this Amendment. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090. Upon entry of the amendments herewith, claims 1-5, 8, 9, 11, 12, 14, 15, and 17 remain pending.

1. Applicants' Interview Summary

On June 18, 2007, the Applicants' undersigned attorney and the Examiner briefly discussed the perfection of the priority date of the Applicants' claim to priority effected upon the filing of the Certified translation of Japanese application No. 2003-090510, filed on March 28, 2003. In view of the perfection to the Applicants' claim to priority, the Examiner issued the present Office Action. Applicants thank the Examiner and the extra effort on her part in preparing the present Office Action.

2. Rejections Under 35 U.S.C. § 103(a)

In the Office Action, at paragraph 2, claims 1-3, 5, 7, 10, and 13 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Suzuki et al.* (U.S. Patent No. 6,149,999), hereinafter *Suzuki*, in view of *Hosoda et al.* (U.S. Publication No. 2003/0118772), hereinafter *Hosoda, Harigaya et al.* (U.S. Patent No. 6,770,346), hereinafter *Harigaya*, *Ohno et al.* (U.S. Patent No. 6,004,646), hereinafter *Ohno*, and *Hirotsune et al.* (U.S. Patent No. 6,856,589), hereinafter *Hirotsune*. It is well-established at law that, for a proper rejection of a claim under 35 U.S.C. § 103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements and/or features of the claim at issue. See, *e.g.*, *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Additionally, at paragraph 3, claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Suzuki*, in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune*, and further in view of *Ohkura et al.* (U.S. Publication No. 2003/0152006), hereinafter *Ohkura*, *Yoshioka et al.* (Re. 36,383), hereinafter *Yoshioka*, and *Ovshinsky* (U.S. Patent No. 6,011,757), hereinafter *Ovshinsky*. At paragraph 4, claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Suzuki*, in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune*, and further in view of *Hirai et al.* (U.S. Publication No. 2002/0106476), hereinafter *Hirai*, *Yoshioka*, and *Ovshinsky*. At paragraph 5, claims 6, 8-9, 12, 14-15 and 17 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Suzuki*, in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune*, and further in view of *Ando et al.* (U.S. Patent No.6,519,413), hereinafter *Ando*. At paragraph 6, claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Suzuki*, in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune*, and further in view of *Ando*, and further in view of *Nakamura et al.* (U.S. Publication No. 2003/0043712), hereinafter *Nakamura*.

a. Independent Claims 1 and 17

Claim 1, as amended, is allowable for at least the reason that the proposed combination of *Suzuki*, in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune* does not disclose, teach, or suggest an optical recording medium "containing a phase change material represented by an atomic composition formula: $Sb_aTe_bGe_cMn_d$, where *a* is equal to or larger than 57 and equal to or smaller than 70, *c* is equal to or larger than 2 and equal to or smaller than 10, *d* is equal to or larger than 11 and equal to or smaller than 20, $(a + d)$ is equal to or larger than 77 and equal to or smaller than 81 and a/b is equal to or larger than 3.3 and equal to or smaller than 4.7, in an amount equal to or more than 95 atomic %," as recited in claim 1. Claim 17, as amended, is allowable for at least the reason that the proposed combination of *Suzuki*, in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune* does not disclose, teach, or suggest a data recording apparatus with a "data reading means for reading ID data written in an optical recording medium for identifying the optical recording medium ... when the ID data indicates that the optical recording medium comprises a recording layer in which a record mark can be formed by projecting a laser beam thereonto ... the recording layer contains a phase change material represented by an atomic

composition formula: $Sb_aTe_bGe_cMn_d$ where *a* is equal to or larger than 57 and equal to or smaller than 70, *c* is equal to or larger than 2 and equal to or smaller than 10, *d* is equal to or larger than 11 and equal to or smaller than 20, $(a + d)$ is equal to or larger than 77 and equal to or smaller than 81 and a/b is equal to or larger than 3.3 and equal to or smaller than 4.7, in an amount equal to or more than 95 atomic %, selects data for setting recording conditions stored in the memory in accordance with the values of *a*, *c*, *d*, $(a + d)$ and a/b" as recited in claim 17.

As noted in the Office Action, *Suzuki*, in view of *Hosoda, Harigaya*, and *Ohno* fail to disclose, teach, or suggest a recording layer material represented by an atomic composition formula: $Sb_aTe_bGe_cMn_d$, where *d* is equal to or larger than 11 and equal to or smaller than 20. The Office Action uses *Hirotsune* to cure this deficiency with respect to the originally filed claim.

However, *Hirotsune* now fails to disclose, teach or suggest at least a phase change material represented by an atomic composition formula: $Sb_aTe_bGe_cMn_d$, where *d* is equal to or larger than 11 and equal to or smaller than 20. *Hirotsune* discloses at most the following:

> Among alternatives to Ge_5 Sb_2 Te_8, or the material of the recording films 13 and 17, Ag--Ge--Sb--Te type and Cr--Ge--Sb--Te type materials of different composition ratios, such as $Ag_3Ge_{30}Sb_{14}Re_{53}$ and $Cr_3Ge_{32}Sb_{13}Te_{52}$, favorably have higher modulation factors. ***If the recording film 13 and/or the recording film 17 contain(s) a greater amount of Ag or Cr, a change in reflectivity increases while the speed of crystallization decreases***. Therefore, the amount of Ag or Cr to be added ***ranges preferably from 2% to 10% by atom***. However, overwrite can also be performed with Ge--Sb--Te type materials having no additional Ag. It was found that Ag to be added to the recording film(s) 13, 17 was replaceable with at least one out of Cr, W, Mo, Pt, Co, Ni, Pd, Si, Au, Cu, V, Mn, Fe, Ti, and Bi while maintaining favorable overwrite characteristics. At reproducing wavelengths, all of these materials for the recording films 13 and 17 have a smaller refractive index in a crystalline state than in an amorphous state.

(Column 17, lines 18-35, emphasis added.)

The above portion of *Hirotsune* discloses at least two problems when the recording film contains amounts of Ag or Cr greater than the disclosed 2% to 10% range. Namely, there is apparently an undesirable change in reflectivity and/or a decrease in the speed of crystallization. Accordingly, one skilled in the art, upon consideration of *Hirotsune*, would understand that the additive should not exceed 10%.

Hirotsune then goes on to disclose that Ag is replaceable with Mn. In view that *Hirotsune* expressly teaches that the additive should not exceed 10% to avoid an undesirable change in reflectivity and/or a decrease in the speed of crystallization, one skilled in the art would understand that the amount of Mn should not exceed 10%. However, this is quite different from the optical recording layer "containing a phase change material represented by an atomic composition formula: $Sb_aTe_bGe_cMn_d$, where ... *d* is equal to or larger than 11 and equal to or smaller than 20" as recited in claims 1 and 17 because this novel composition allows amounts of Mn in excess of 10%. Accordingly, *Hirotsune* fails to disclose the recited features of amended claims 1 and 17.

Since the proposed combination of *Suzuki* in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune* does not disclose at least the claimed limitations of claims 1 or 17, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 1 and 17 are not obvious under proposed combination of *Suzuki* in view of *Hosoda, Harigaya, Ohno*, and *Hirotsune*, and the rejection should be withdrawn.

b. Dependent Claims

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-5, 8, 9, 11, 12, 14, 15 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that the dependent claims 2-5, 8, 9, 11, 12, 14, 15 contain all features/elements of independent claim 1. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, the rejection to these claims should be withdrawn.

Claims 6, 7, 10, and 13 are canceled without prejudice, waiver, or disclaimer, and therefore, the rejection to these claims are rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these canceled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the canceled subject matter to the public.

3. Obviousness-Type Double Patenting Rejections

The Office Action has rejected claims 1-5 and 7-10 under the judicially created doctrine of obviousness-type double patenting as being obvious over claims 1-16 of copending Application No. 10/824,081. In the Office Action, as noted by the Examiner, a terminal disclaimer may be used to overcome a provisional rejection based on a non-statutory obviousness-type double patenting. The Applicants will consider filing a terminal disclaimer in the present application if one or both of these co-pending applications issue before the present application, and if the present application is still pending at that point. Otherwise, it is respectfully submitted that since the other co-pending application has not yet issued, the present application can be passed into allowance and issued without the filing of a terminal disclaimer. A terminal disclaimer may then be filed, if appropriate, in the other co-pending application, based on the issuance of the present application.

Accordingly, the Applicants respectfully request that the provisional obviousness-type double patenting rejection be withdrawn, and that the pending claims be allowed. The Examiner is requested to telephone the undersigned attorney if the co-pending application has issued prior to the present application so that the Applicants may file a terminal disclaimer if appropriate, or respond to the properness of a rejection of the claims of the pending application with respect to any issued claims of the co-pending application, to expedite prosecution of the present application. Applicants are prepared to file a terminal disclaimer should the co-pending application issue as a patent and if the subject matter of the claims of such issuing patent is properly subject to a double patenting rejection.

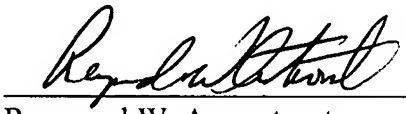
4. Conclusion

In light of the above amendments and remarks, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that all pending claims 1-5, 8, 9, 11, 12, 14, 15, and 17 are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact Mr. Armentrout by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the

Examiner notes any informalities in the claims, she is further encouraged to contact Mr. Armentrout by telephone to expediently correct such informalities.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC



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